

audio research

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VACUUM TUBE PHONO PREAMPLIFIER

MODEL: PA-21 (REV. 2/2004)



Audio Research PH5 Phono-Stage

by Jimmy Hughes

I recently covered four different phono-stages in these very pages, and each one was very good in their own individual way. When you get to this sort of level, choice becomes difficult. While one might have specific individual preferences, very often standards will be high enough to completely satisfy nearly every requirement. You almost have to create false distinctions to choose a "Winner" when the basic standard is so high.

Here's yet another outstanding phono-stage, this time from Audio Research. It deserves serious consideration – and not just for its undoubted sonic excellence. One immediate plus point is the provision of front panel cartridge loading adjustment, and a stereo/mono switch. It gets better; you can alter these functions via the supplied remote handset.

While quite a number of phono-stages offer variable loading, it's often difficult for the user to access the facility. You either have to grapple with a set of microscopically small, difficult to adjust switches, or unscrew the top to gain access to internal boards. You certainly can't sit back in your listening chair and A/B compare the various different options via remote control. So, the PH5 has a major advantage over its competitors.

Of course, you could argue that loading is something you set and then leave. Therefore, the fact that access is awkward isn't necessarily the end of the world. I fully agree. But, while

you're still deciding which loading option produces the best results, it's handy to have quick and easy access. It means you're able to make comparisons while each sound remains fresh in the ears – and do so from your listening seat.

And anyway – who's to say that one's preferences remain constant? There may be times when you prefer a



change of loading to suit a particular LP. And of course you might have more than one turntable, and/or a whole bevy of

cartridges. Although there are often good technical reasons why cartridge loading switches are placed inaccessibly, the sad fact is that many of us probably won't bother to try different options because of the hassle involved in doing so. So top marks to Audio Research for making loading adjustment easy!

Using a Transfiguration Aria as my main cartridge, I eventually settled on a load value of 500 Ohms. The default setting of 47k Ohms gave the most open sound, but as loading increased

(paradoxically, it 'increases' by lowering the resistance) the sound grew fuller and slightly more dimensional. The bottom-end plumped-up a little at 500 Ohms, giving the bass a marginally rounder more full-bodied quality which I liked.

The PH5 sounds very three-dimensional, producing an impressively holographic soundstage. Partnered with the outstanding PrimaLuna Prologue 2 integrated amplifier, it gave a sound that was very solid and at the same time well-separated. The combination of loading the cartridge at 500 Ohms and the warm rich tonal balance of the PrimaLuna resulted in a solid, weighty sound. Yet at the same time the balance was clear and open.

I'd say the battery powered Sutherland PHD still had the edge over the PH5 so far as sheer openness and naturalness was concerned, being quite unlike any phono-stage I've previously encountered. The ARC, by comparison, has a smoother more velvety sound – an attractive alluring richness and warmth – while at the same time sounding deliciously holographic. It's forgiving, yet highly detailed too; smooth but articulate.

Surface noise has a nice 'soft' quality; noisy surfaces don't hiss and spit at you with quite as much vehemence as some transistor phono-stages. Playing a contemporary copy of the CBS LP *Blood Sweat and Tears* by the band of the same name, I was impressed by the way the PH5 had the necessary precision to reveal the multi-tracked multi-mono nature of the

▶ recording, yet somehow did so without pulling the recording to pieces.

The PH5's gain is slightly lower than usual at 57dB, and noise levels are a fraction higher too. If you were using a very low output MC pickup (say, less than 200uV) it

second far more important reason – to do with playing mono LPs using a stereo cartridge.

Stereo pickups (unlike mono ones, which can only move laterally) are sensitive to vertical movement. This makes them very sensitive to surface irregularities and nasties like turntable bearing rumble. Some mono LPs (and quite a few stereo LPs too!)

of vinyl enthusiast with a collection that includes vintage mono LPs, especially those from the '50s, you'll find they sound a whole lot cleaner and quieter when played with the mono button engaged.

Sometimes, the difference can be staggering. Subjectively, as much as 20dB reduction in noise. And, as this noise is cancelled and not filtered, the music itself does not suffer in terms of bandwidth or dynamic range. Why this

valuable (and easy to include) facility is omitted from the great majority of phono-stages is beyond me. No if's or but's – a stereo/mono switch should be absolute compulsory!

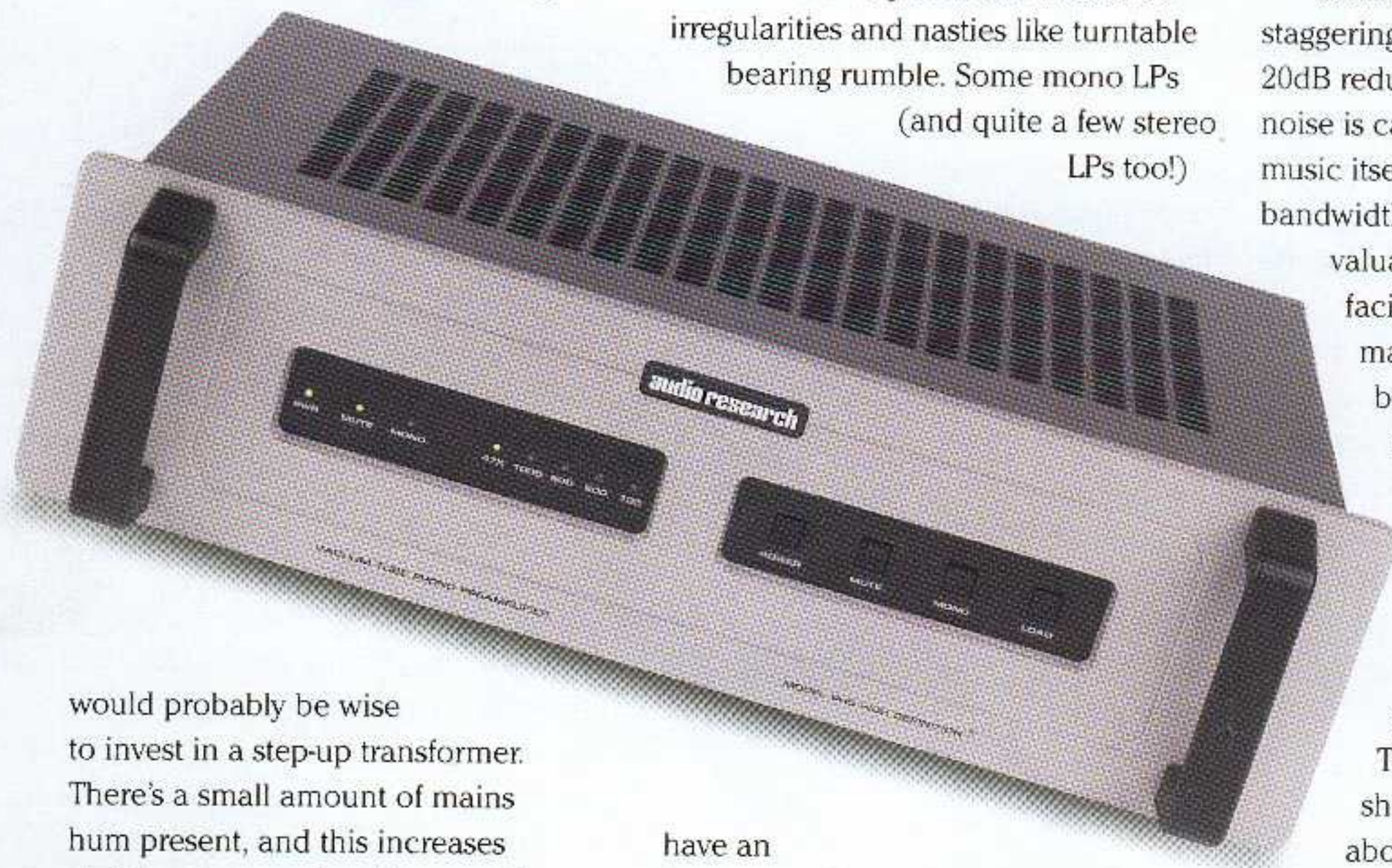
Tube compliment (for this is, in Audio Research tradition, a valve circuit) consists of four ECC88 dual triodes with a J-FET input.

The makers claim the tubes should have a working life of about 2000 hours. Bandwidth is extremely wide, and Audio

Research quote an impressive 10Hz to 60kHz within +/- 0.25dB. The -3dB points occur at 0.7Hz to beyond 400kHz – very wide by any standards – and fully comparable to the best direct-coupled solid state designs.

Whilst accepted wisdom now seems to suggest that solid-state is the way to go for phono-stages, at least as far as amplifying the output of MC cartridges goes, ARC have a long history of using valves to fulfil this function (along with c-j and Convergent Audio Technology) and by being canny and keeping overall gain moderate, they have largely kept the noise issues at bay. Having said that, valve

quality will be critical (just think back to the likes of the SP8 and SP10) and it might well pay to experiment a little here. The quietest valves don't always sound the best, but I reckon you ▶



would probably be wise to invest in a step-up transformer. There's a small amount of mains hum present, and this increases slightly when you load the cartridge. I experienced no actual problem with noise using the Aria (about 500uV), but it's there if you go looking for it.

Because there's a range of loading options, from 47k Ohms down to 100 Ohms, the PH5 is compatible (or – perhaps more correctly – usable) with either MM or MC cartridges without needing to be switched one way or t'other. Maximum input voltage is given as 70mV @ 1kHz – a high figure. Of course, the loading options only apply to MC cartridges – virtually all MM pickups will need to be terminated with 47k Ohms

The other great practical benefit with this phono-stage is the provision of a stereo/mono switch. Now, younger readers might question the point of this. Actually, there are two reasons. The first would have been to allow you to A/B compare mono and stereo; in the days when stereo was new and something of a novelty, it was useful to compare the difference. But there's a

have an 'orange peel' sort of surface that causes background noise. Playing mono LPs with the channels summed (ie mono'd) eliminates such disturbances.

It's interesting to look at mono LPs pressed in the '50s; often, the surfaces look very rough and uneven.



Because stereo placed far greater demands on surface quality and flatness, there was a general raising of standards in LP pressing and vinyl quality from the early 1960s. So, if you're the sort



► might find a happy medium which could pay musical dividends, elevating the already fine performance of this phono-stage even further. And unlike output tubes, ECC88s aren't going to break the bank!

The four phono-stages featured in my comparative review were all very heavy; this one's a comparative featherweight at a mere 5.1kg – 11.3lbs. In use, the PH5 gets barely warm. The makers recommend a warm-up time of about 1 hour, but actually it sounds pretty close to its best within ten or fifteen minutes.

Incidentally, the phono-stage mutes for about 30 seconds when switched on to prevent bangs and thumps while the power supply stabilises.

As previously indicated, the PH5's sound quality is first-rate: smooth and tonally warm, but surprisingly detailed and very holographic. It's a wholly natural and unexaggerated sound that's both engaging and easy on the ear. Because it's impressively dimensional, the PH5 creates a vivid 'out of the boxes' 3D soundstage – meaning you don't need to play the music loudly to create a big vivid effect.

It's smooth and natural, yet colourful too, while remaining beautifully integrated. The high treble is subjectively less exposed

than it can sometimes be with other phono-stages, yet there's no lack of brilliance or detail. And the easy-to-change loading option makes it simple and quick to tailor the sound to individual requirements. Because it's so easy to implement, you're more likely to experiment with this important parameter.

By solid state standards the PH5 is not absolutely quiet – hum and hiss levels



are slightly higher – but this will only be problematic if you use a very low output MC cartridge – 200uV or less. All things being equal, you'd expect a tube phono-stage to be slightly noisier than a solid-state one, and the PH5 is no exception. But in most situations the noise will not be audible – and that's what's important.

On a purely practical level, the provision of a stereo/mono switch and remote-control loading are big plus factors. Speaking as someone who regularly plays mono LPs, having a stereo/mono switch is invaluable. Given that it's a feature absent from nearly all other comparable phono-stages, not to mention amplifiers and pre-amplifiers, it's especially welcome. If I were buying a phono-stage myself,

this would be a major consideration.

Take these factors together and they make the Audio Research PH5 another outstanding phono-stage; one that offers both outstanding sound quality and exceptional ease of use. Not so long ago we were scrabbling around for decent stand-alone phono-stages to take on the task of amplifying the ever tinier signals emanating from MC cartridges. Since then, cartridge output levels have been on the increase and so has the number of top-notch phono-stages jostling for attention, until now they represent what must be one of the most over-populated sectors of the market (after cables of course – but that goes without saying). The good news is that so many of them are so good.

Decisions! Decisions!



TECHNICAL SPECIFICATIONS

Type:	Standalone valve phono-stage
Valve Complement:	4x ECC88
Inputs:	1pr RCA-phono
Overall Gain:	57dB
Input Impedance:	100 Ohms – 47kOhms remotely controllable
Outputs:	1pr RCA-phono
Output Impedance:	200 Ohms
Dimensions (WxHxD):	470 x 132 x 254mm
Weight:	5.1 Kg
Finishes:	Front panel in silver or black
Price:	£1799

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